

Introduction to CONSTRUCTION AUDITING

Presented by
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Jefferson Wells International

Our Purpose - an Overview

- Terms
- Types of contracts
- Reasons for auditing construction projects
- Understand the construction project life cycle
- Management of construction projects
- Selecting projects for audit
- Audit steps and timing
- Contractor Billing Overview

Ground Rules

- None
- When you have a question – ASK!

Terms

- Architect & A&E
- AIA
- Asset Allocation Study
- Backcharges
- Change order, extra work & Claim
- Contractor, CM, GC
- Construction engineering
- Consumables, Expendables & Small Tools
- Cost
- Crafts & Trades
- Design Builder
- Fast Track
- General Conditions
- Labor

Terms

- Materials
- Owner
- OSHA
- Retainage
- Sales & Use Taxes
- Site
- Shared savings
- Subcontractor
- Subsistence
- Tax abatement
- Turn Key
- Value
- Engineering
- More Terms – See
RS Means
Company 800 334
3509 Dictionary

Types of Contracts

- Lump Sum, Fixed Cost, Stipulated Sum
- Cost Plus
 - Cost Plus with Fixed or Percentage Fee
 - Cost Plus with Guaranteed Max
 - Cost Plus with GMAX & Shared Savings
- Unit Price
- Time & Material

Why audit construction projects?

- Top management is concerned and exposed
- Construction projects are costly
- Delays can result in lost market opportunity
- Provides monitoring not available elsewhere
- Provides a means of keeping projects on track, or gets them back on track quickly

Goals of a Construction Audit

- Identify Cost Avoidance Opportunities
- Ensure Controls Are Developed & Maintained
 - Owner
 - Contractor
- Identify Overcharges/Undercharges
- Avoid Litigation

Construction Life Cycle

- Planning
 - Conception
 - Design
- Contracting
- Construction
- Close-out

How are construction projects managed?

- Inside or Outside Project Manager
- Company Officer
- Executive Committee
- Architect

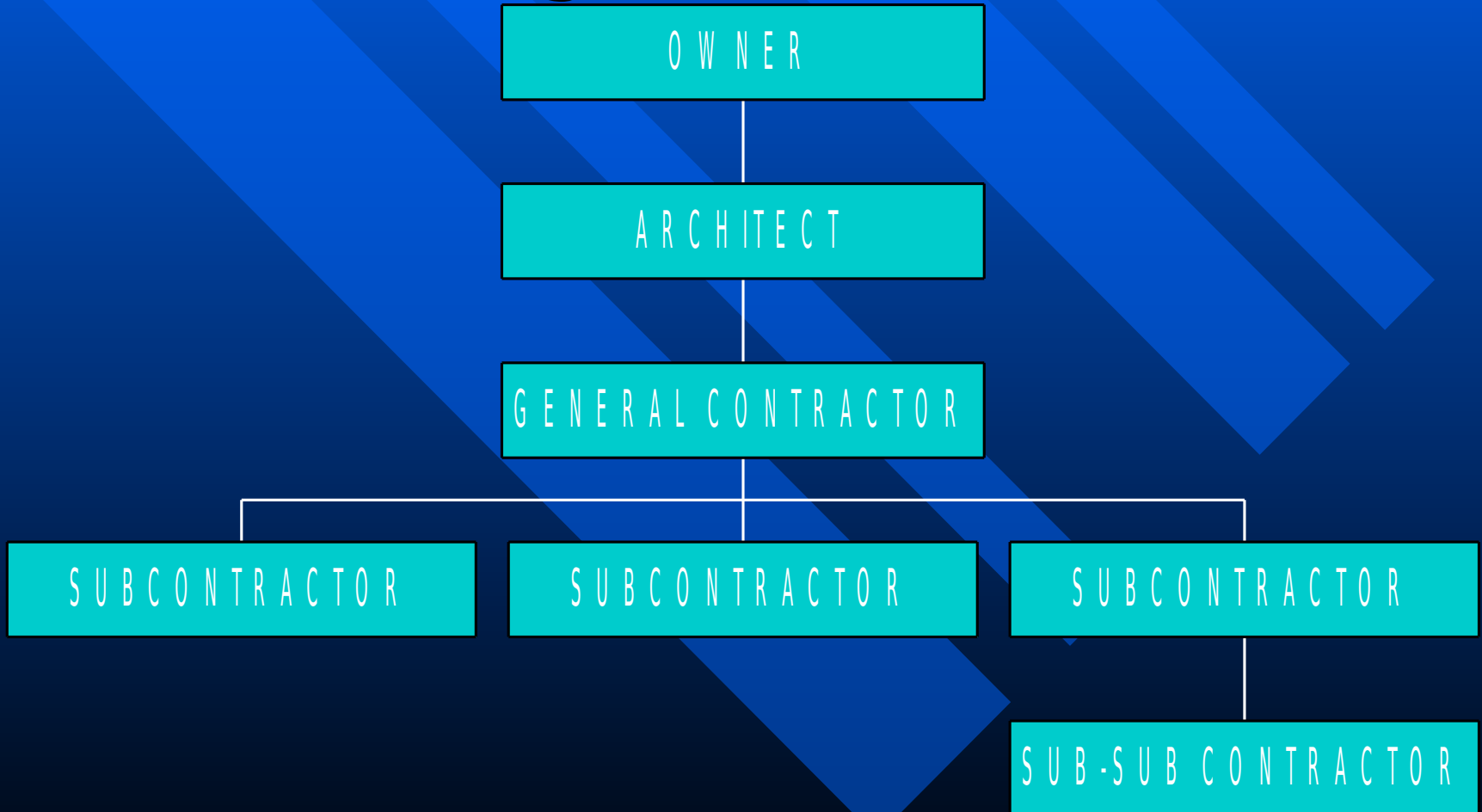
Owners Project Management Team

- Project Manager and/or Owners Representative
- Purchasing
- Legal
- Contract Administration
- Finance & Accounting
- Auditing
- Tax (consult)
- Risk Management (consult) - OCIP

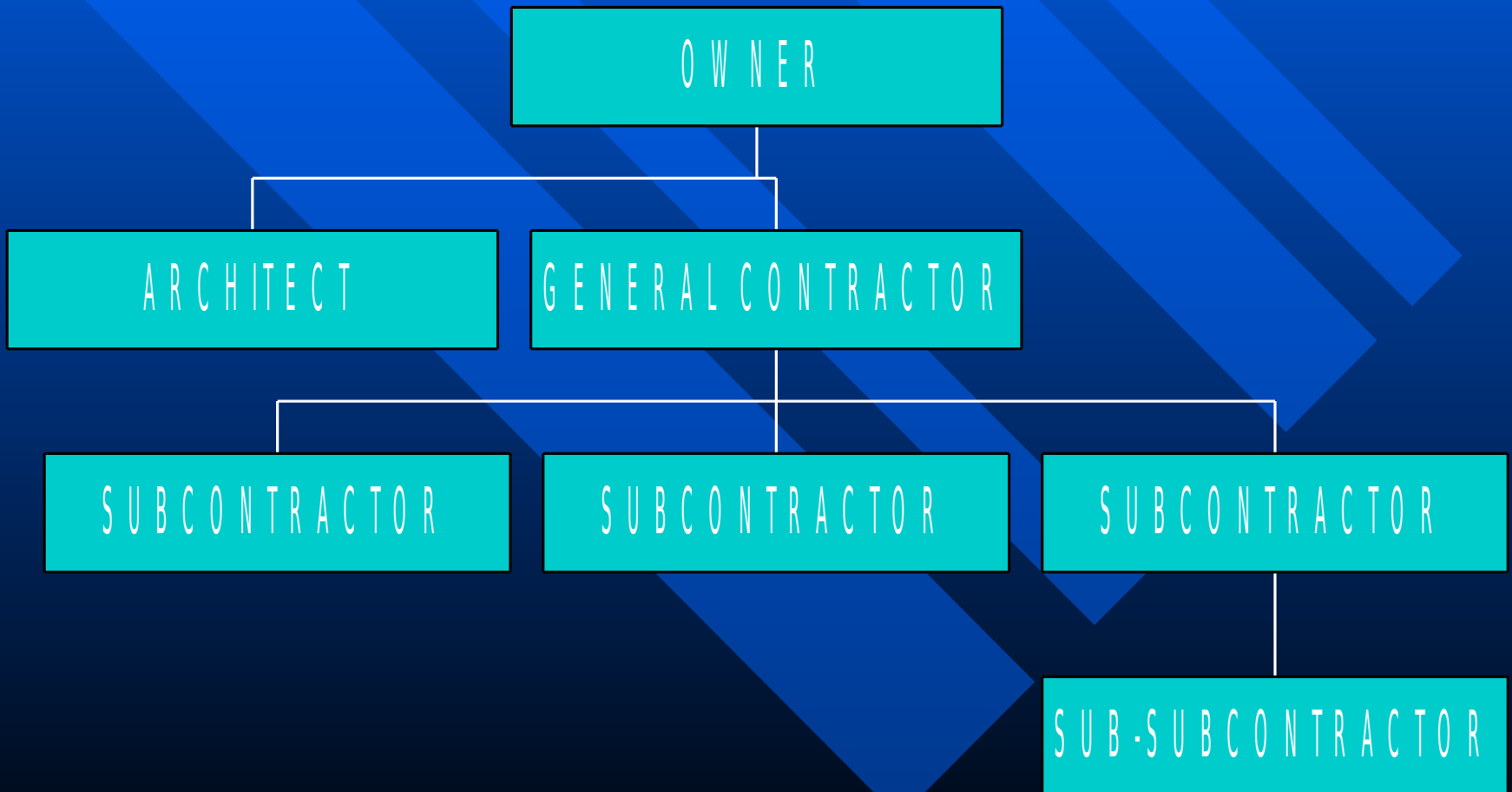
External Organizations

- Architect
- Engineering
- Construction Manager
- General Contractor
- Owners Representative
- Subcontractors
- Testing
- Survey

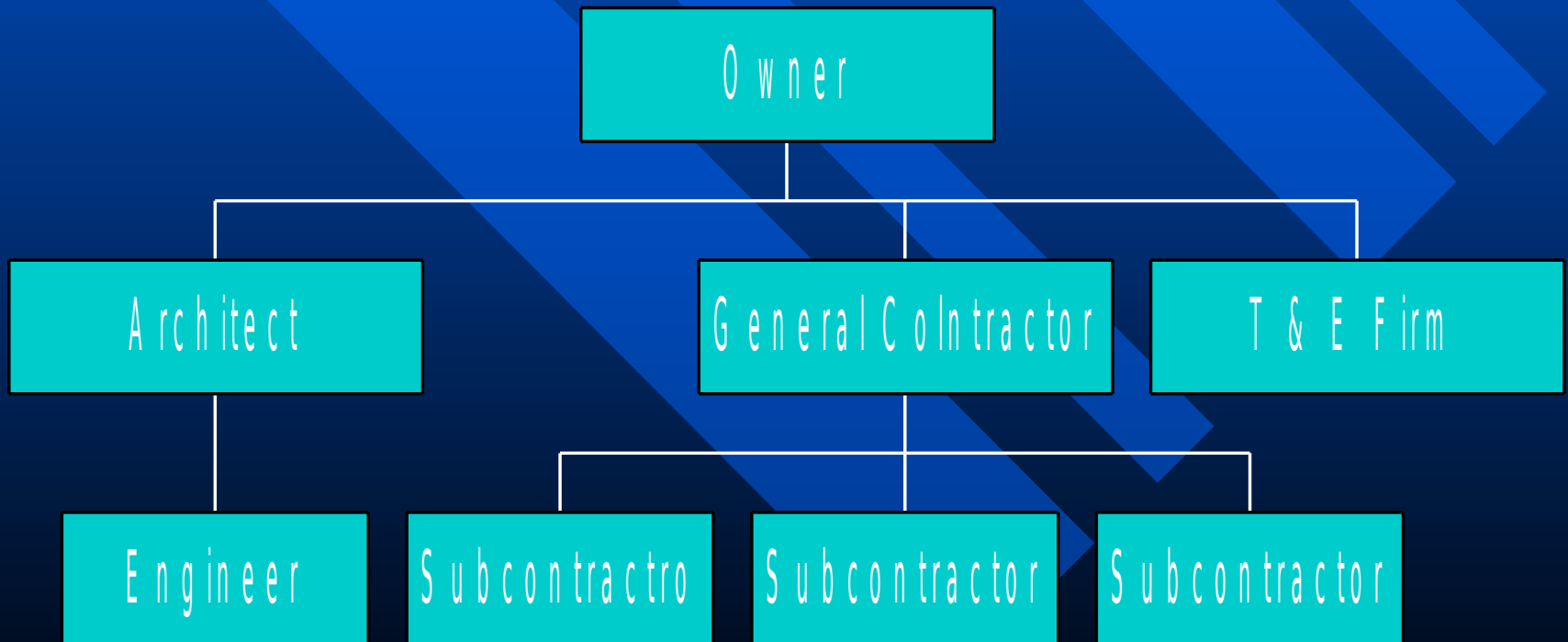
Typical Project Organization



Alternate Project Organization

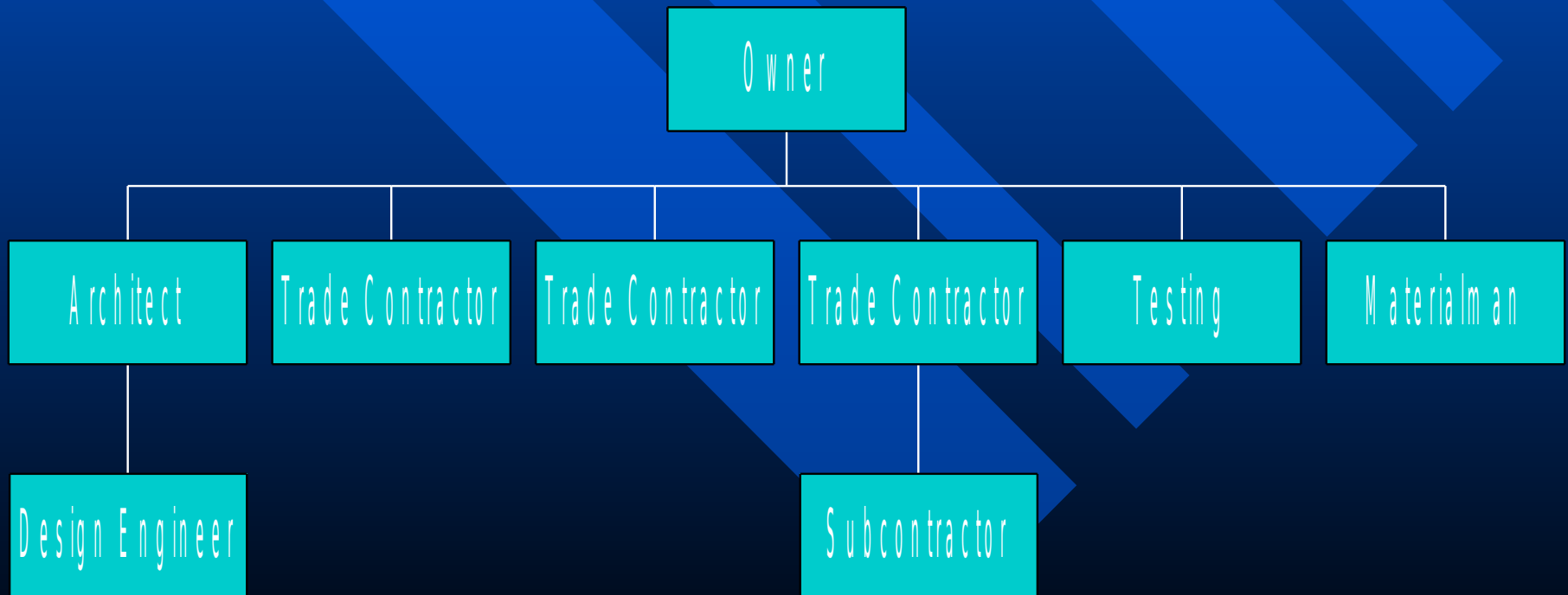


Alternate Project Organization



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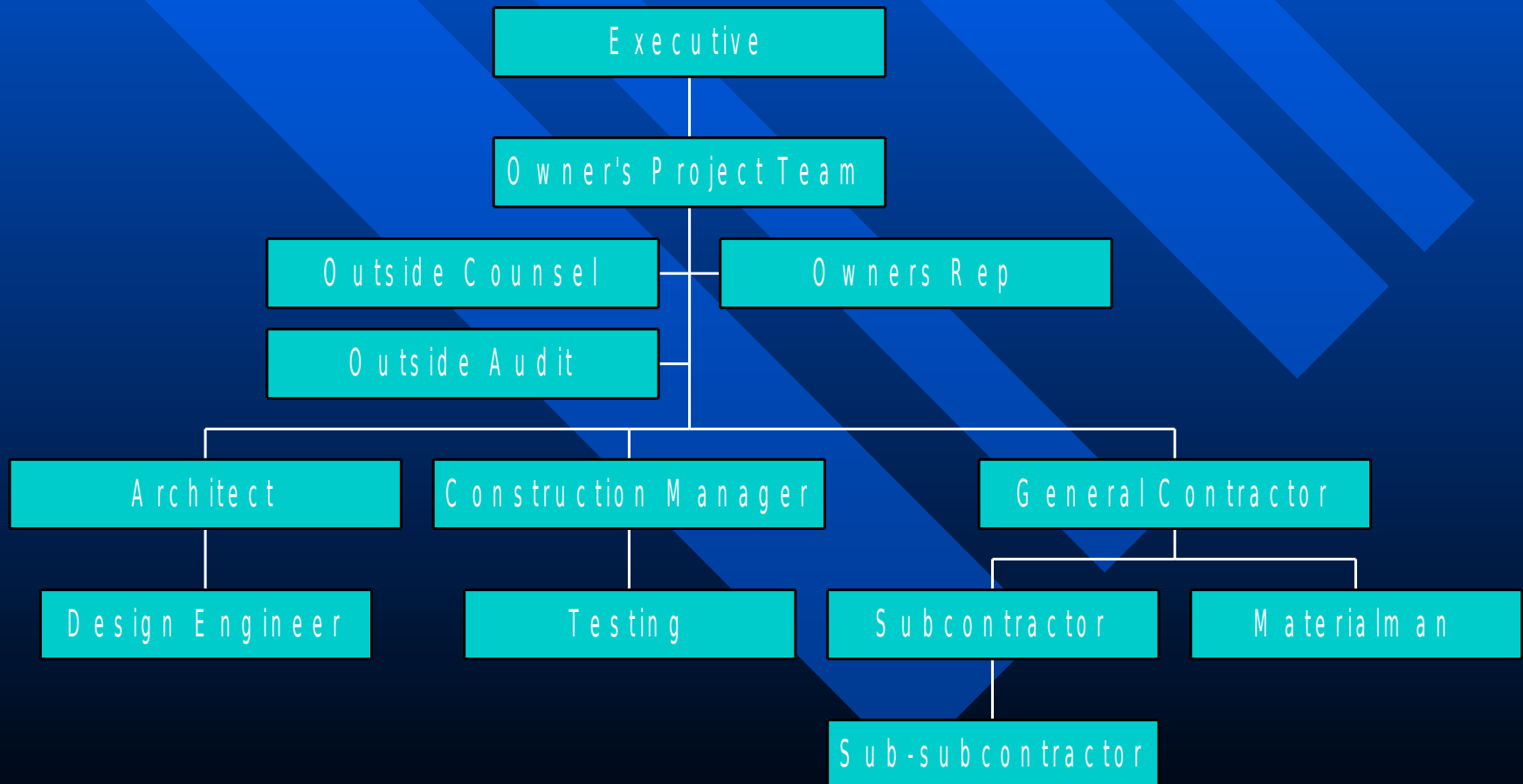
Owner as General Contractor



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Alternate Project Organization

Owner with full support



What is the best organization?

- All types work
- Use the one that suits your organization

How should projects be selected for audit?

- Size (\$ value & physical size)
- Type of contract
 - Cost Plus & T&M versus Lump Sum
 - Shared Savings Features
- High profile or high risk projects
- Experience of Owners Representative
- Experience with the General Contractor

Contract Risk

Cost Plus

- Labor
 - Rates & Fringes
 - Subsistence
 - Uncompensated overtime
 - Not to exceed limits ignored
 - Travel & reimbursable
 - Union rates
 - Ghosts

Contract Risk

Cost Plus

- Materials
 - Trade & other discounts
 - Excessive material
 - Scrap & returns
 - Sources
 - Rework

Contract Risk

Cost Plus

- Equipment
 - Rent to own
 - Rental exceeds purchase price
 - Excess damage costs
 - Sweetheart deals
 - Taxes on fuel
 - Equipment not on job
 - Rental rebates not credited

Contract Risk

Cost Plus

- Insurance
- Performance bond
- Home office charges
- Permits & licenses
- Fines
- Mathematical errors

Contract Risk T & M

- Use of incorrect labor costs
- Use of incorrect material mark ups
- See Cost Plus

Contract Risks

Stipulated Sum, Lump Sum or Fixed Fee

- Materials outside specification
- Quantities not installed
- Improper construction methods
- Change orders in original bid
- Owner supplied material not credited
- Insurance not purchased
- Change orders not costed correctly

Contract Risks

Lump Sum or Fixed Fee

- “Front End” or “Top Loading”
- Bonds not obtained
- Unauthorized subcontractors used
- Tax errors
- Contract work performed by owner’s employees
- Services not provided

Unit Price

- Erroneous estimates
 - Mobilization/demobilization
 - Improper measuring/quantity verification

Recommended Contract Type

- Cost Plus
- Guaranteed Max
- Shared Savings Feature

Elements of a typical construction audit program

- Bid Review (Optional)
- Contract Review
- Control Assessment
- Contractor Billing Tests - Progress Billings
 - Labor
 - Materials
 - Equipment (Contractor owned & rented)
 - Subcontractor charges

Elements of a typical construction audit program

- Contractor Billing Tests (continued)
 - Permits and licenses
 - Miscellaneous charges (small tools & consumables)
 - Overhead charges
 - Contractor fee
 - Retainage calculation
 - Performance bond & insurance
 - Home office charges

Elements of a typical construction audit program

- Contractor Billing Tests (continued)
 - Physical inspection and review of engineering inspection reports
 - Relocation & travel
- Control Verification
- Financial Review
 - Lead schedules
 - Receivables
 - Payables

Elements of a typical construction audit program

- Financial Review (continued)
 - Construction in Process (CIP)
 - Fixed Assets

Audit reports

- Bid Review
- Contract Review
- Trip Reports
- Final Report

What should be contained in trip reports?

- Tailor to the organization
- Typical trip report
 - Summary
 - Comments
 - Issues Requiring Follow-up & Party Responsible
 - Visit Schedule

Auditor Selection

- Internal
 - Train Your Own
 - Hire an Experienced Auditor
- External
 - Public Accounting Firms
 - Construction Auditing Firms

Change Orders

- Change Orders
- Extra Work
- Claims

Change Order Template

Contract:					Change Order #		Bulletin #	
Scope of Change:							Line Item #	
Drawing	Material					Labor		
Sheet #	Description	Quantity	Unit Price	U/M	Cost	Hrs/Unit	Unit	Hours
					-			-
					-			-
					-			-
					-			-
					-			-
					-			-
					-			-
					-			-
					-			-
					-			-
Total material NIC Sales & Use Tax					-	Total Labor Hours		-

Change Order Template

LABOR & BURDEN COSTS							
Labor Cost per Hour - Ave							
Labor Hours Estimated							-
Estimated Field Labor Cost							-
Supervision Percentage of Field Labor							-
Subtotal for Field Labor							-
Add for Payroll Taxes							-
Add for Insurance							-
Add for benefits							-
Project Manager @ (No. Hours) x Hourly Rate							-
Engineering @ (No. Hours) x Hourly Rate							-
Total Direct Labor Costs							-
Add (%) for Fee							-
Total Labor Costs							-

Change Order Template

MATERIAL COSTS FROM DETAIL							
Material Costs from Detail							-
Sundry Material @ % Material Cost							0%
Subtotal Material Costs							-
Small Tools @ % of Materials							0%
Freight on Material @ % of Materials							0%
Sales & Use Tax on Materials @ %							0%
Fuel for Rental Equipment							
Rental Equipment							
Total Other Direct Costs							
Add % for Fee							
Total Material & Equipment							-

SUBCONTRACT COSTS							
Subcontractor							
Net Subcontractor Costs							-
Fee @ % of Subcontractor Costs							-
Total Subcontractor Costs							-

Change Order Template

Total Labor Costs							-
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Total Material & Equipment							-
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Total Subcontractor Costs							-
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RECAP OF TOTAL COSTS							
Labor & Burden Costs							-
Material & Equipment Costs							-
Subcontract Costs							-
Total Change Order Proposal							-

Typical Findings

- Defective Pricing in CO's
- Unauthorized Items Billed
 - Home office charges
 - Other
- Labor Overcharges
 - Workers Comp Rates
 - FUI/SUI
- Materials Not Used on Job
- General Conditions
- G/L Insurance – Experience Modifiers

Typical Findings

- Duplicate Charges
- Equipment Billed Not in Use
- Bonds not purchased
- Backcharges not accomplished
- Scrap not Credited
- Unauthorized Substitution of Materials
- Unapproved Methods

Which Types of Contracts and Projects Should be Audited?

- All Types

When Should Construction Projects be Audited?

- Begin at Planning
- Concurrently Throughout the Project
- Closeout

Jefferson Wells Approach

1. Contract Analysis
2. Blueprint the project organization
3. Determine the risks
4. Develop the Work Plan
5. Initial Report
 - contract analysis, recommend improvements
 - project management, recommend controls
6. Conduct the engagement
 - Verify charges
 - Monitor controls
7. Update meetings
8. Complete the planned work and add other tests deemed necessary
9. Final Report

Contract Analysis

- What to look for
 - Type of contract
 - Complete?
 - » Executed?
 - » All exhibits & attachments?
 - Financial Terms and Conditions
 - Right-to-audit
 - Change order/extra work/claims
 - General Conditions

Work Plan

- Select tests from Master Audit Program
- Add other tests based on analysis of this project

What does a contractor billing look like?

- See Sample G702 and G703
- Certification by Contractor & by Architect

Construction Auditing

- Questions and Answers
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